

Abstract

Radiation detector

The invention specifies a radiation detector for detecting radiation (8) according to a predefined spectral sensitivity distribution (9) that exhibits a maximum at a predefined wavelength λ_0 , comprising a semiconductor body (1) with an active region (5) serving to generate a detector signal and intended to receive radiation, in which according to one embodiment the active region (5) includes a plurality of functional layers (4a, 4b, 4c, 4d) that have different band gaps and/or thicknesses and are implemented such that they (4a, 4b, 4c, 4d) at least partially absorb radiation in a range of wavelengths greater than λ_0 . According to a further embodiment, disposed after the active region is a filter layer structure (70) comprising at least one filter layer (7, 7a, 7b, 7c), said filter layer structure determining the short-wave side (101) of the detector sensitivity (10) according to the predefined spectral sensitivity distribution (9) by absorbing wavelengths smaller than λ_0 . A radiation detector for detecting radiation (8) according to the spectral sensitivity distribution (9) of the human eye is also specified. The semiconductor body can be monolithically integrated.

Fig. 1